

Best Management Practices & Management Measures



Common NPS pollutants

- Nutrients
 - From manure, fertilizers, septic systems, and soil runoff
- Pathogens
 - From livestock, pet, and human waste
- Sediment
 - From row crop land, construction sites, stream bank erosion, forest roads



Agriculture: Common NPS Pollutants

- Nutrients
 - Nitrogen
 - Phosphorus
- Sediment
- Animal Wastes
- Salts
- Pesticides



Forestry: Common NPS Pollutants

- Sediment
- Temperature
- Flow changes
- Organic debris
- Nutrients
- Flow barriers
- Chemicals (herbicides, insecticides, and fungicides)



Urban areas: Common NPS pollutants

- Sediment
- Petroleum products
- Metals
- Pathogens
- ↑ Temperature
- Nutrients
- Habitat impacts
- Litter and debris



Marinas: Common NPS Pollutants

- Sediment
- Petroleum Products
- Pathogens
- Solvents
- Metals
- Litter and debris
- Antifreeze
- Cleaning chemicals



NPS Management Measures and Best Management Practices

Definitions:

Management measures are the best available, economically achievable measures (categories of BMPs) to control the addition of pollutants to surface and ground water.

Best management practices (BMPs) are individual actions or structures that can be used alone or in combination to implement the management measures

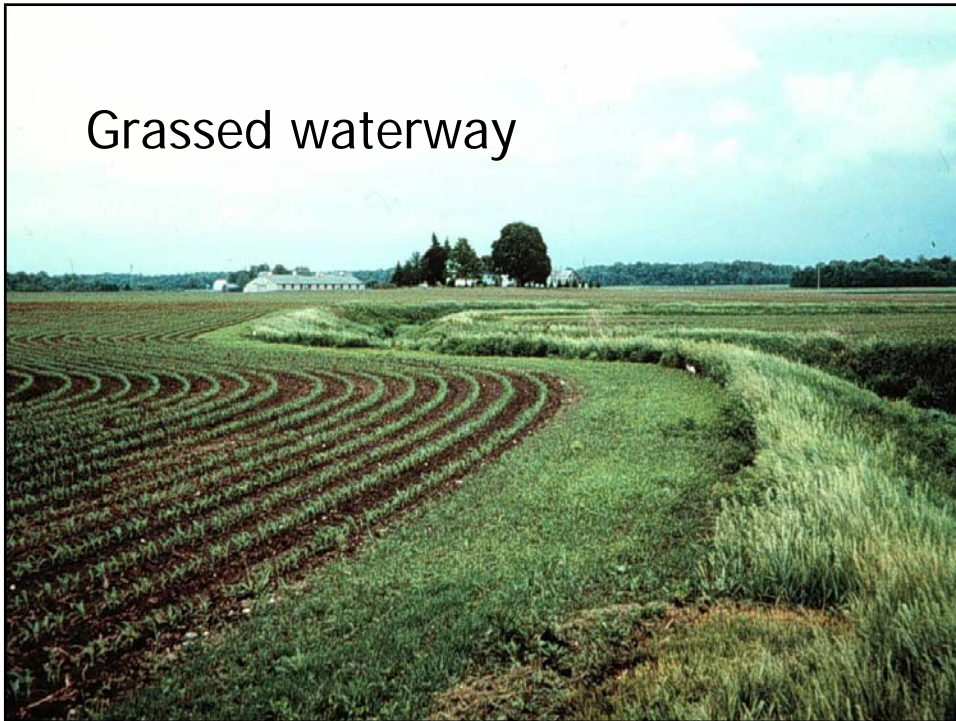
General categories of BMPs

- Control pollutants at the source
 - Promote stormwater infiltration
 - Seed & mulch bare areas immediately
 - Don't let contaminants wash off the land
- Provide treatment for special wastes
 - Livestock manure containment/management
 - Septic system upgrades
- Prevent stream & river bank erosion
 - Preserve vegetation along banks
 - Control upland runoff after development
- Redesign "developed" areas
 - Preserve existing site drainage features & vegetation
 - Promote infiltration and detention

The Five Ss for NPS Management

- Soak it in – promote infiltration
- Slow it down – don't let gullies form
- Spread it around – no concentrated flows
- Sift it out – use silt fences & barriers
- Settle it out – detention/stormwater ponds

Grassed waterway



**Riparian
forest
buffers**



Watering away from the creek



Manure management



Conservation



Better wastewater treatment

